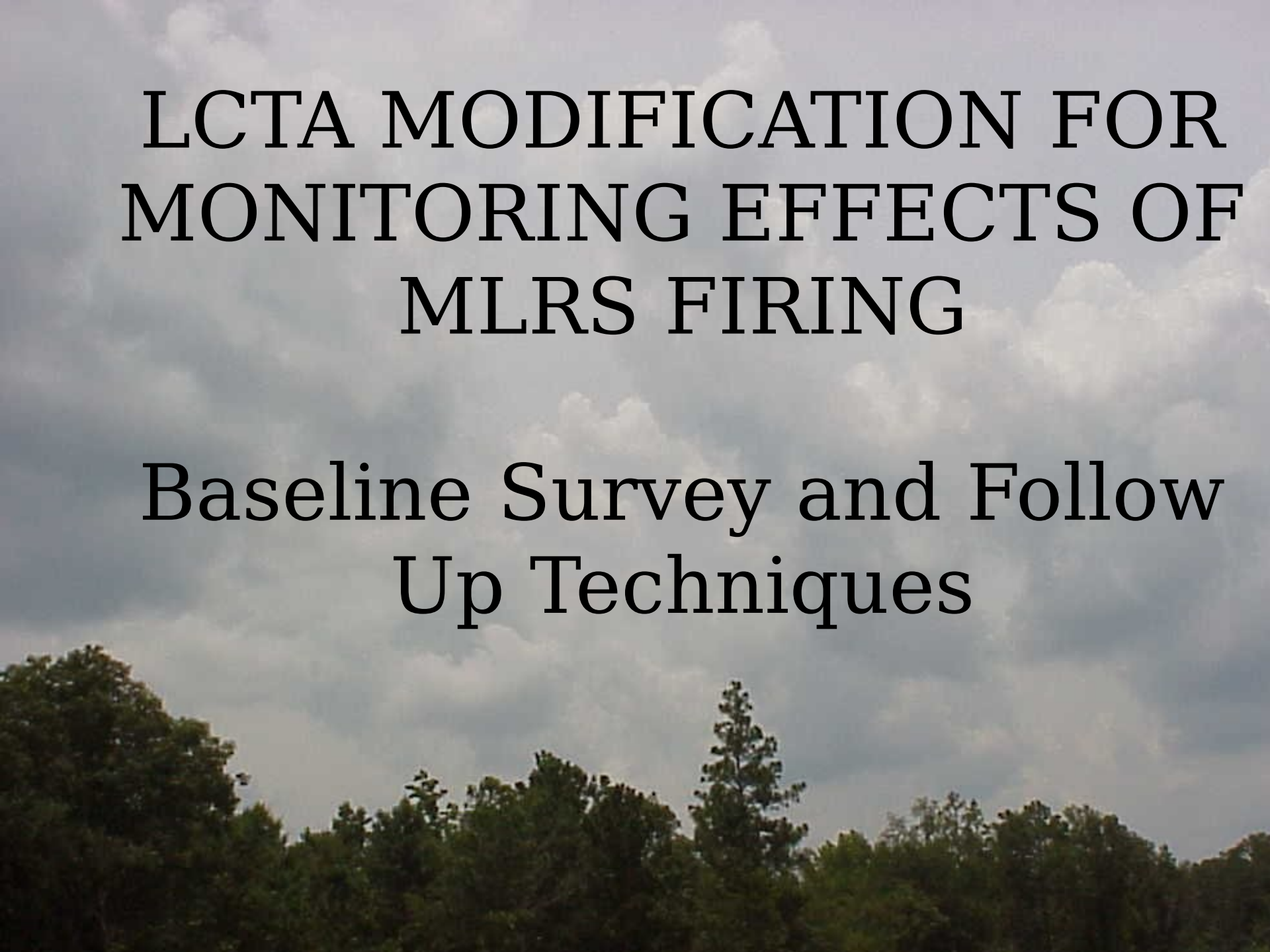
LCTA MODIFICATION FOR MONITORING EFFECTS OF MLRS FIRING

Baseline Survey and Follow Up Techniques



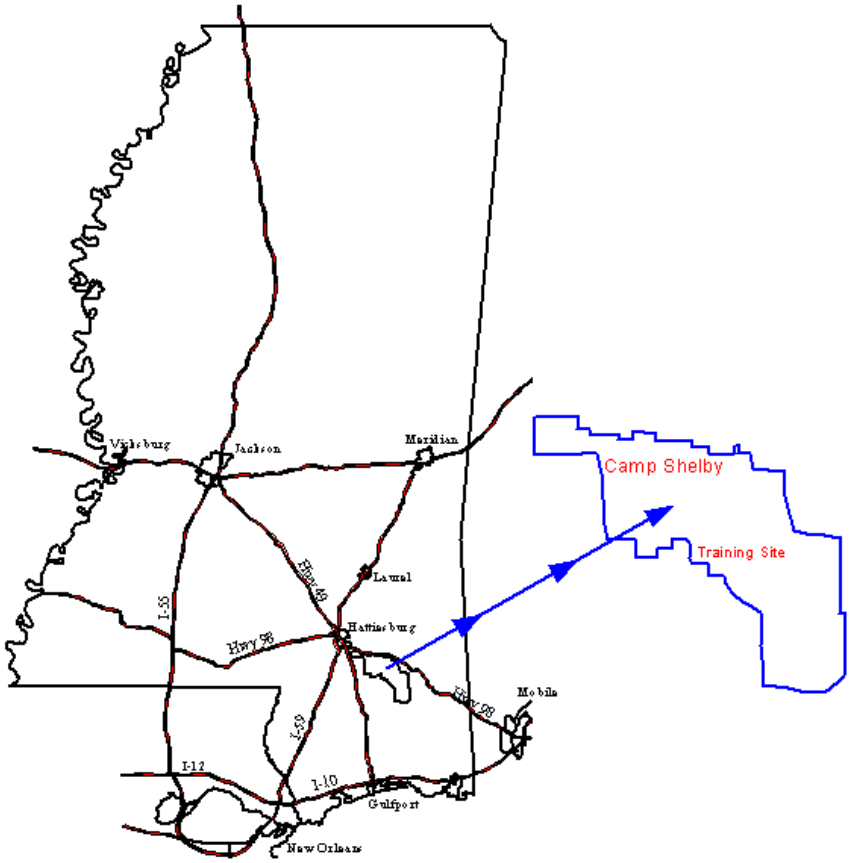
ACKNOWLEDGEMENTS

University of Southern Mississippi

- Dr. Fred G. Howell, LCTA Principal Investigator
- Dr. Sam W. Rosso, LCTA Floristic Inventory
- Tommy G. Dye, Jr., LCTA Director of Field Studies

Mississippi Military Department

- COL Bob Lee, Environmental Program Manager, NGMS-FMO-E
- CPT Bob Lemire, Natural Resource Manager, NGMS-FMO-E
- J. David Allen, LCTA Coordinator, NGMS-FMO-E

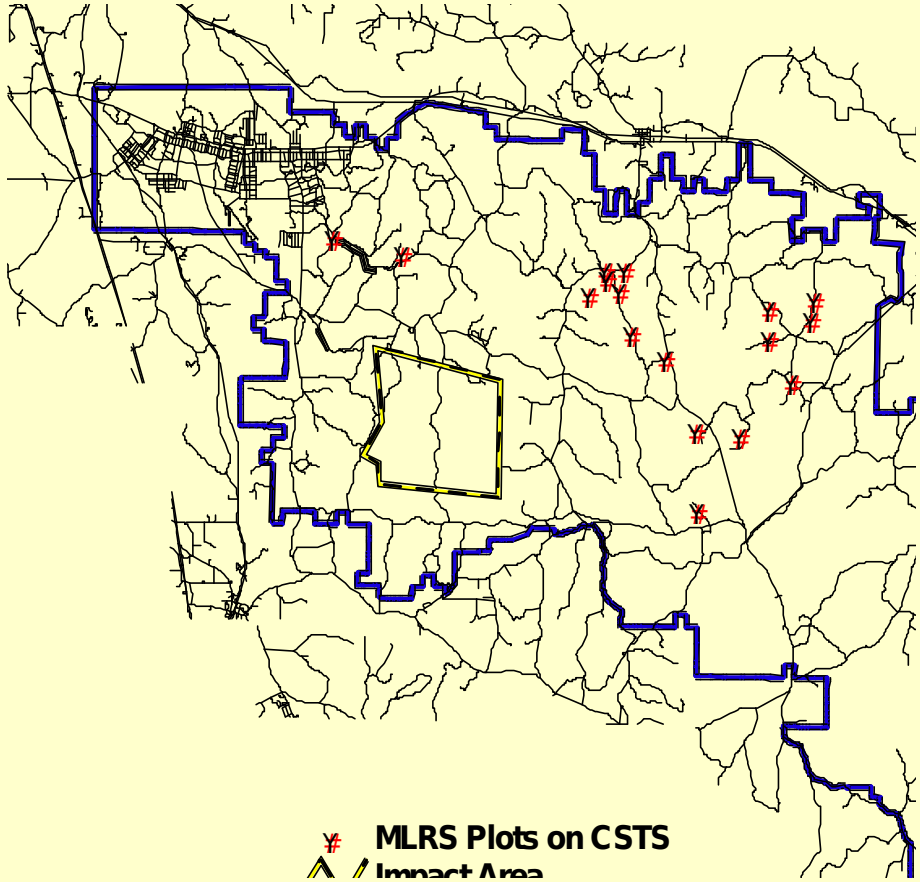


SCALE: 1" = APPROXIMATELY 64 MILES

N
W
E
S

Interstates & Federal Highways

MLRS plots on CSTS



INTERAGENCY COOPERATION (SUP)

- US FOREST SERVICE
- USFS LAND

- MISSISSIPPI NATIONAL GUARD
- CAMP SHELBY TRAINING SITE

Multiple-Launch Rocket System (MLRS)

MLRS M28A1 Reduced Range Practice Rocket (RRPR)

- Range: 8 – 15 km
- Solid Propellant Fuel
- 8.9 in diameter, 12.9 feet long, 677 lbs.
- Non-explosive warhead
- **73.44 lbs. Al compound exhaust per rocket**
- **43.42 lbs. HCl exhaust per rocket**

Monitoring Plan Included In MLRS EA

- Soil
- Water
- Vegetation
- Animals: Proposed, Threatened, and Endangered Species
- ITAM Components
- University of Southern Mississippi
- The Nature Conservancy

LCTA Mission and Goals

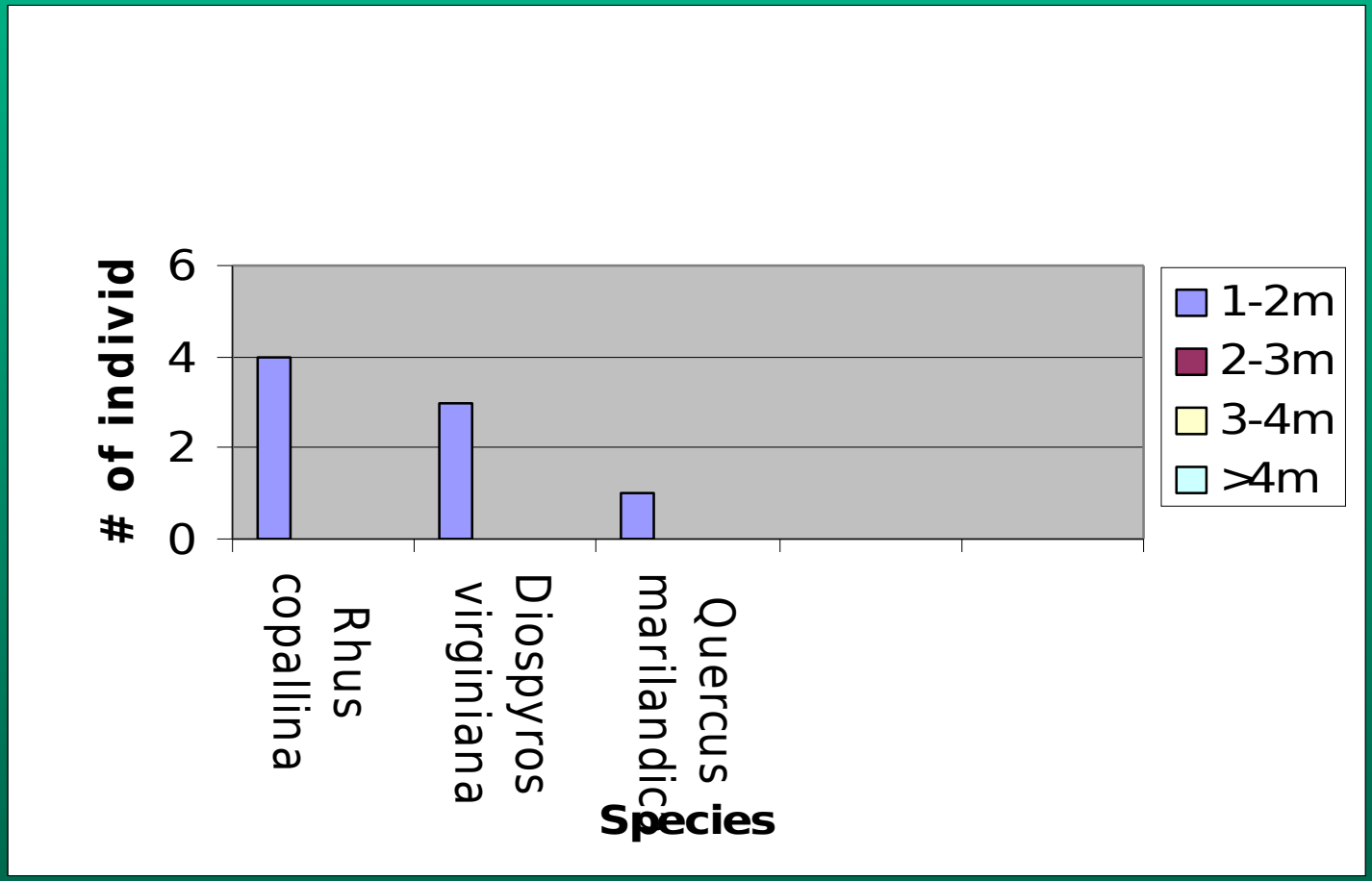
- Evaluate capability of land to meet sustained multiple use demands
- Monitor and evaluate changes in land resources based on current land use
- Amend land management plans to ensure long-term resource availability in support of both military mission and environmental objectives

LCTA Methodology

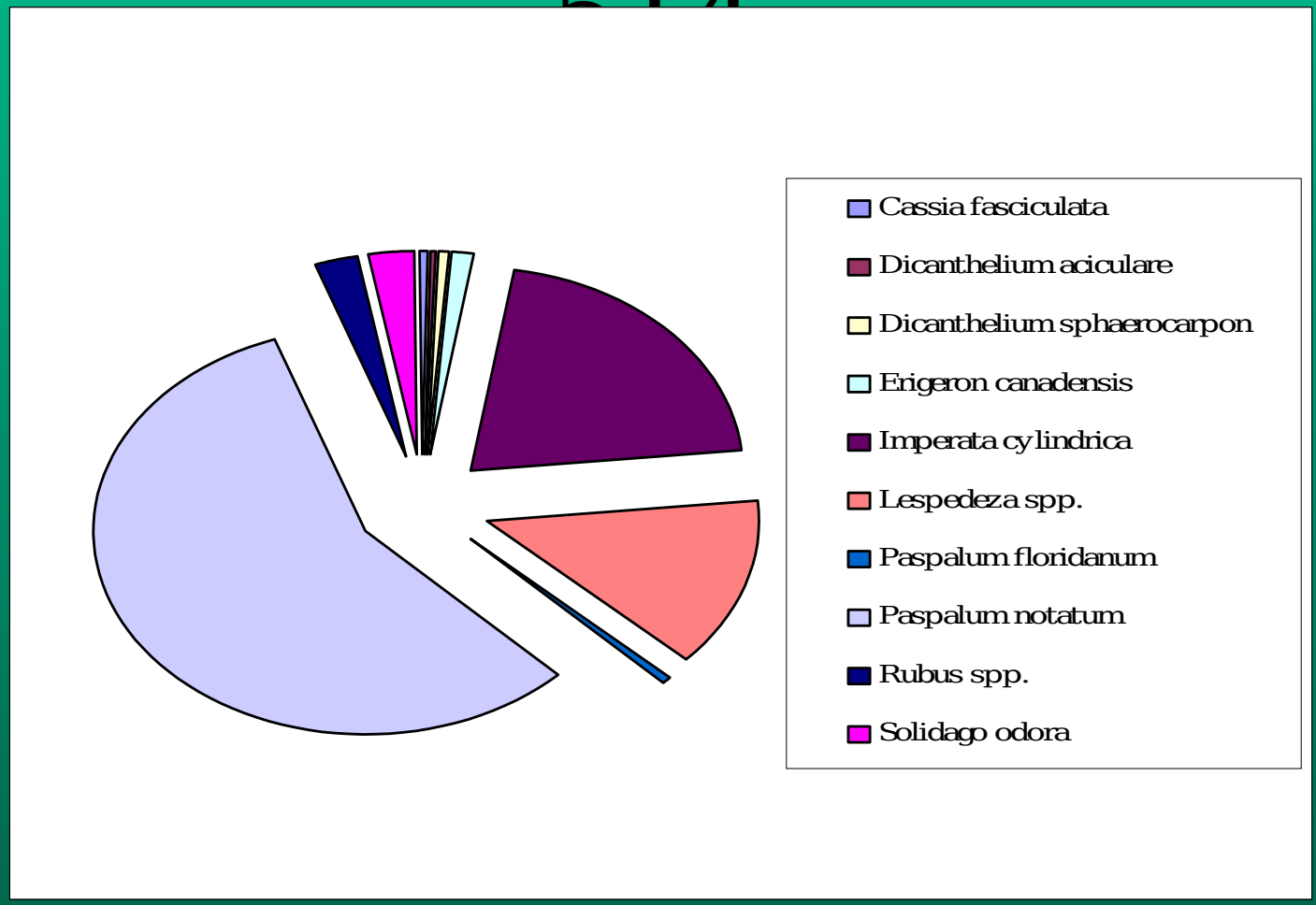
- Species Composition
- Species Richness
- Vegetation Structure / Vertical Stratification
- Ground Cover
- Land Use/Disturbance
- Erosion
- Photographic Record

LCTA Plot 2012 Firing Point 514

Woody Species Detected- Plot 2012 Firing Point 514

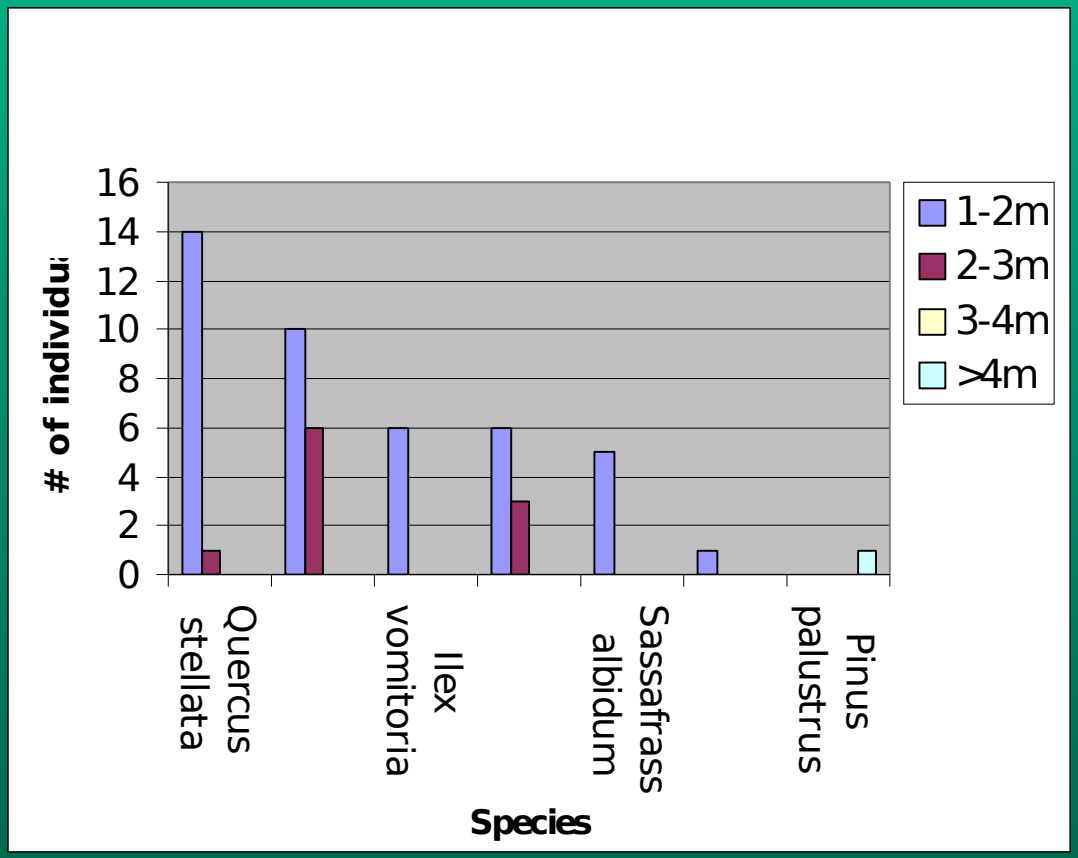


Proportion of Intercepts Per Species-Plot 2012 FP 514

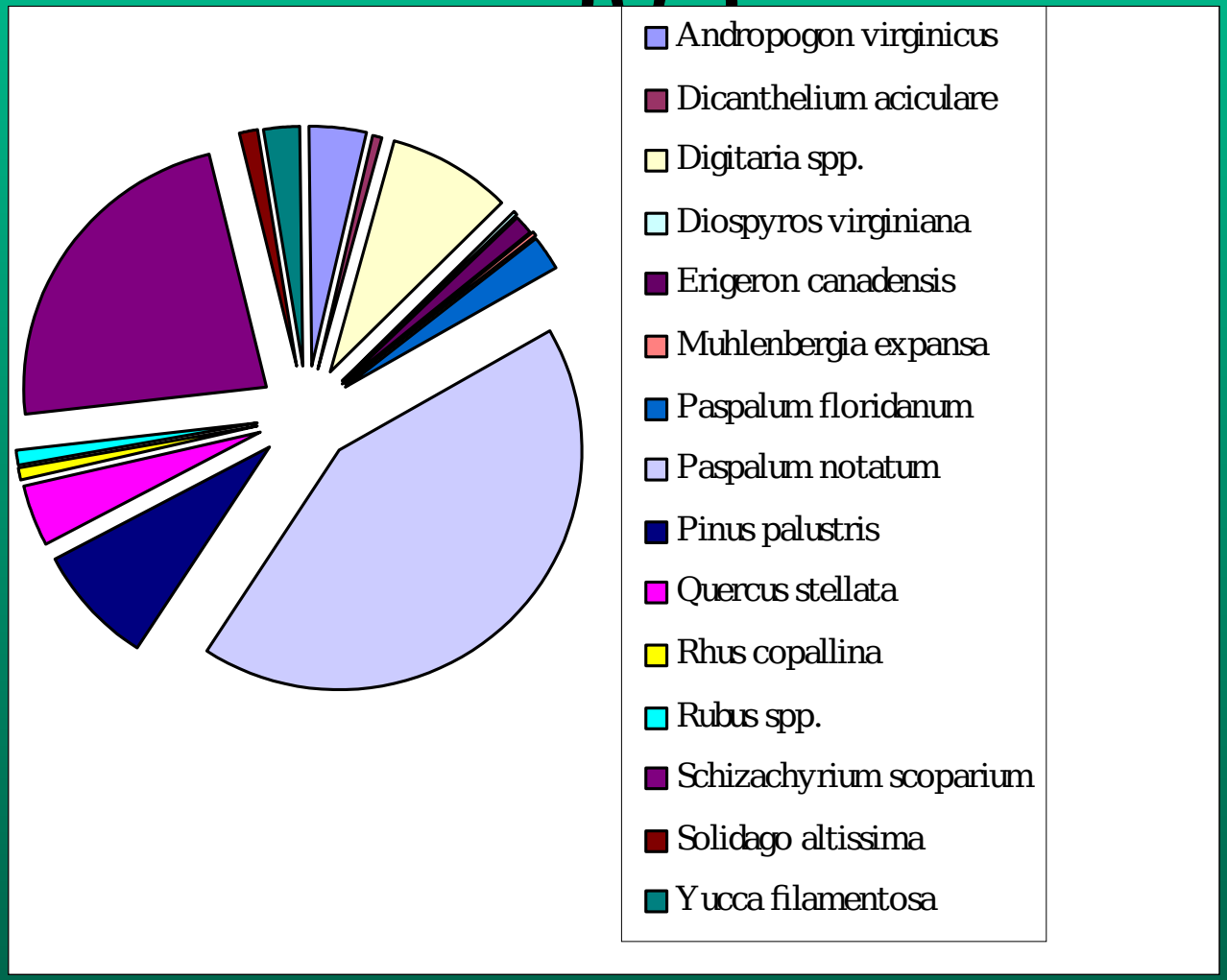


LCTA Plot 2017 Firing Point 503

Woody Species Detected- Plot 2017 FP 503



Proportion of Intercepts Per Species-Plot 2017 FP 503



Modification to LCTA Methodology

- 13 New Data Collection Points Per Plot (1 square meter each)
- Percentage of Necrosis and Chlorosis
- Percent Plant Cover by Species
- NOTE: Azimuth not random – USFS Land

MLRS LIVE FIRE EXERCISE CAMP SHELBY, MS

105th Field Artillery Brigade, Chattanooga, TN Army National Guard

COMMAND AND

FIRE !!!

IMMEDIATE EXHAUST

M28A1 RRPR AWAY

The Plume Dissipates

Grass Fire

RANGE CONTROL TO THE RESCUE

Another Round of Firing

196BDE-F-I-181F
C12

TN Congressman Van Hilleary

FIRE
EXTINGUISHER
WARNING

MLRS Leaves The Area

Environmentalists Move In

That’s All Folks.

THANK YOU